

# Exhibit 77



**MAS TEM Coefficient of Variation for Tremolite and Anthophyllite in Talc**  
**A Quality Control Study**  
**9-6-18**

**Purpose**

The purpose of this Quality Control study was to determine the MAS TEM analysis coefficient of variation (CV or relative standard deviation RSD) after spiking cosmetic grade talc powder with tremolite and anthophyllite asbestos standard reference material (SRM).

**Materials and Methods**

Talc powder samples spiked with a known amount of tremolite and anthophyllite were produced as follows. A 1.0 gram sample of cosmetic grade talc powder was heated in a muffle furnace at  $400 \pm 5^\circ\text{C}$  for a minimum period of 4 hours in order to remove any bound organic material. Tremolite (NIST SRM 1867 Tremolite) and anthophyllite (NIST SRM 1867 Anthophyllite) asbestos were then added to the talc powder to obtain a concentration of 0.3 % asbestos by weight. The spiked sample was thoroughly mixed in a ball mill for 5 minutes.

Approximately 20 mg of a spiked talc sample was added to 1.2 mL of heavy density liquid (lithium metatungstate, sodium polytungstate, or equivalent heavy liquid), adjusted to a density of 2.85g/ml) in a 1.5 mL conical micro centrifuge tube. Using a disposable stir rod, the spiked talc sample was dispersed in the heavy liquid by macerating the solids between the inside of the centrifuge tube and the rod. The sample was then shaken by hand to ensure even distribution in the liquid. Bubbles in the liquid were removed after 15 minutes in a low vacuum chamber at 8 Torr. Sample tubes were centrifuged at approximately 9000 rpm for 90 minutes according to ISO-22262-2 (1). Tubes were frozen in liquid nitrogen, then the tip containing the frozen pelleted solids was removed with a pre cleaned steel cleaver and transferred to 45 mL deionized distilled H<sub>2</sub>O in a 60 mL centrifuge tube. The tube was capped, shaken by hand five times and then the contents were filtered through a 0.2 – 0.8 um polycarbonate filter followed by an additional 50-100 mL of DI H<sub>2</sub>O. The PC filter was dried and prepared for TEM analysis.

Sample filters were analyzed by TEM at 100 KeV and 20,000 magnification for asbestos and talc. A total of 25 of the same grid squares were analyzed for tremolite and anthophyllite asbestos by each of four TEM analysts. Tremolite and anthophyllite asbestos structures measuring 0.5 um or greater with 5:1 aspect ratios and substantially parallel sides were counted according to the asbestos definition structure sizing rule as stated in the standard TEM protocols (AHERA (TEM section only) ASTM D5755, D5756, D7712-11, ISO 10312, ISO 13794, (2-7)) after verifying the chemistry by EDS and the selected area diffraction pattern (SAED) of each structure. The average (Ave) number of asbestos structures in 25 grid squares were determined for all four analysts along with the standard deviation (SD). The coefficient of variation (CV or RSD) as a percentage was then determined according to the following equation (8, 9).

$$CV = 100 \times \frac{SD}{Ave}$$

## Results

Results from the TEM analysis of the spiked talc powder samples are shown in Table 1 and Table 2 that follow. Table 1 shows that for the 0.3% tremolite spiked talc sample, the fiber-bundle concentration ranged from  $3.2 \times 10^5$  to  $3.55 \times 10^5$  structures of tremolite per gram of talc. For the 0.3% anthophyllite spiked sample, the fiber-bundle concentration ranged from  $4.9 \times 10^5$  to  $5.39 \times 10^5$  structures of anthophyllite per gram of talc. Table 2 shows the average (Mean) standard deviation and the CV for the analysis of each of the asbestos spike samples. The mean for the tremolite spiked sample  $3.38 \times 10^5$  and the SD was  $2.0 \times 10^4$  structures per gram of talc. The CV was 5.99%. The mean for the tremolite spiked sample  $5.14 \times 10^5$  and the SD was  $2.8 \times 10^4$  structures per gram of talc. The CV was 5.50%.

TABLE 1 Total Structures and Structures per gram of Tremolite and Anthophyllite in Talc Powder Samples

Sample	Component	Str/g			
		Analyst 1	Analyst 2	Analyst 3	Analyst 4
0.3%	Tremolite	3.20E+05	3.55E+05	3.20E+05	3.55E+05
0.3%	Anthophyllite	4.90E+05	5.39E+05	4.90E+05	5.39E+05

TABLE 2 Average, SD and CV for the TEM Analysis of Tremolite and Anthophyllite in Talc Powder Samples

Sample	Component	Str/g		
		Mean	STD	CV (%)
0.3%	Tremolite	3.38E+05	2.0E+04	5.99
0.3%	Anthophyllite	5.14E+05	2.8E+04	5.50

Data for the calculation of the CV and Tables 1 and 2 are shown in Appendix 1.

## REFERENCES

1. ISO 22262-2, 2014-09-01
2. EPA AHERA-Part 763 Asbestos (TEM Section Only)
3. ASTM D7712-11 - Standard Terminology for Sampling and Analysis of Asbestos
4. ASTM D5755 - Test Method for Microvacuum Sampling and Indirect Analysis of Dust by Transmission Electron Microscopy for Asbestos Structure Number Surface Loading

5. ASTM D5755 - Test Method for Microvacuum Sampling and Indirect Analysis of Dust by Transmission Electron Microscopy for Asbestos Structure Number Surface Loading
6. ISO 10312 - Ambient air -- Determination of asbestos fibres -- Direct transfer transmission electron microscopy method
7. ISO 13794 - Ambient air -- Determination of asbestos fibres -- Indirect-transfer transmission electron microscopy method
8. Heisler, S.I. (ed) In Economics/Statistics. Wiley Engineer's Desk Reference. p 456. John Wiley and Sons, New York, NY, (1998).
9. Average, Standard Deviation and Relative Standard Deviation.  
<http://www.chem.tamu.edu/class/fyp/keeney/stddev.pdf>

## **APPENDIX 1**

TEM Bulk Talc Structure Count Sheet						
Project/ Sample No.	M65947-001 0.3% Tremolite in Talc		Grid Box #	8617	No. of Grids Counted	2
Analyst:	Analyst 1			Length	Width	G. O. Area
Date of Analysis	7/16/2018		G. O. in microns =	105	105	11025
Initial Weight(g)	0.02055			105	105	11025
Analysis Type	Post Separation Talc Analysis		Grid Acceptance	Yes	Average	11025
Scope No.	Accelerating Voltage	100 KV	Loading%	25%	G.O.s Counted	25
3	Screen Magnification	20 KX	Area Examined mm²			0.276

Str. #	Grid Opening	Structure	Asbestos Type	Length	Width	Ratio	SAED	EDS
NSD	A8-E1							
NSD	A8-E10							
1	A8-E2	Bundle	Tremolite	8.9	1.4	6.4	X	X
NSD	A8-E3							
2	A8-E4	Fiber	Tremolite	6.6	0.2	33.0	X	X
3	A8-E5	Bundle	Tremolite	10	1	10.0	X	X
NSD	A8-E6							
4	A8-E7	Fiber	Tremolite	6.9	1.3	5.3	X	X
5	A8-E8	Bundle	Tremolite	15.3	1.1	13.9	X	X
6	A8-E9	Bundle	Tremolite	43.2	6.9	6.3	X	X
NSD	A8-F10							
7	A8-F2	Bundle	Tremolite	9	1.4	6.4	X	X
NSD	A8-F3							
NSD	A8-F4							
NSD	A8-F5							
8	A8-G1	Bundle	Tremolite	18.9	1.2	15.8	X	X
NSD	A8-G10							
NSD	A8-G2							
NSD	A8-G3							
NSD	A8-G4							
NSD	A8-G5							
9	A8-G6	Bundle	Tremolite	4.9	0.92	5.3	X	X
NSD	A8-G7							
NSD	A8-G8							
NSD	A8-G9							

Org. Sample Wt.      Sample Wt. Post  
   HL Separation

0.02055	0	g
Percent of Orig. Post Separation	0	(%)

Wt. Of Sample Analyzed	0.00002817	g
Filter size	201.1	mm <sup>2</sup>
Number of Structures Counted	9	Str.
<b>Structures per Gram of Sample</b>	3.20E+05	Str./g

<b>Detection Limit</b>	3.55E+04	Str./g
<b>Analytical Sensitivity</b>	3.55E+04	Str./g

Reviewer /Date: 2018.09.06 14:29:27 -04'00'

Digitally signed by MW Rigler, Ph.D.

TEM Bulk Talc Structure Count Sheet						
Project/ Sample No.	M65947-001 0.3% Tremolite in Talc		Grid Box #	8617	No. of Grids Counted	2
Analyst:	Analyst 2			Length	Width	G. O. Area
Date of Analysis	7/19/2018		G. O. in microns =	105	105	11025
Initial Weight(g)	0.02055			105	105	11025
Analysis Type	Post Separation Talc Analysis		Grid Acceptance	Yes	Average	11025
Scope No.	Accelerating Voltage	100 KV	Loading%	25%	G.O.s Counted	25
3	Screen Magnification	20 KX	Area Examined mm²			0.276

Str. #	Grid Opening	Structure	Asbestos Type	Length	Width	Ratio	SAED	EDS
NSD	A8-E1							
NSD	A8-E10							
1	A8-E2	Fiber	Tremolite	8	1.5	5.3	X	X
NSD	A8-E3							
2	A8-E4	Fiber	Tremolite	6.4	0.2	32.0	X	X
3	A8-E5	Bundle	Tremolite	10	0.8	12.5	X	X
NSD	A8-E6							
4	A8-E7	Bundle	Tremolite	6.4	1	6.4	X	X
5	A8-E8	Fiber	Tremolite	15	0.9	16.7	X	X
6	A8-E9	Bundle	Tremolite	43	6	7.2	X	X
NSD	A8-F1							
7	A8-F2	Bundle	Tremolite	8.4	1.3	6.5	X	X
NSD	A8-F3							
NSD	A8-F4							
NSD	A8-F5							
8	A8-G1	Bundle	Tremolite	10.4	1	10.4	X	X
NSD	A8-G10							
NSD	A8-G2							
NSD	A8-G3							
NSD	A8-G4							
9	A8-G5	Bundle	Tremolite	5.8	0.8	7.3	X	X
10	A8-G6	Fiber	Tremolite	4.8	0.8	6.0	X	X
NSD	A8-G7							
NSD	A8-G8							
NSD	A8-G9							

Org. Sample Wt.	Sample Wt. Post HL Separation
0.02055	0 g
Percent of Orig. Post Separation	0 (%)

Wt. Of Sample Analyzed	0.00002817 g
Filter size	201.1 mm <sup>2</sup>
Number of Structures Counted	10 Str.
Structures per Gram of Sample	3.55E+05 Str./g

Detection Limit	3.55E+04 Str./g
Analytical Sensitivity	3.55E+04 Str./g

Digitally signed by MW Rigler, Ph.D.  
Reviewer /Date: 2018.09.06 14:29:40 -04'00'

TEM Bulk Talc Structure Count Sheet						
Project/ Sample No.	M65947-001 0.3% Tremolite in Talc		Grid Box #	8617	No. of Grids Counted	2
Analyst:	Analyst 3			Length	Width	G. O. Area
Date of Analysis	7/16/2018		G. O. in microns =	105	105	11025
Initial Weight(g)	0.02055			105	105	11025
Analysis Type	Post Separation Talc Analysis		Grid Acceptance	Yes	Average	11025
Scope No.	Accelerating Voltage	100 KV	Loading%	25%	G.O.s Counted	25
3	Screen Magnification	20 KX	Area Examined mm²			0.276

Str. #	Grid Opening	Structure	Asbestos Type	Length	Width	Ratio	SAED	EDS
NSD	A8-E1							
NSD	A8-E10							
1	A8-E2	Fiber	Tremolite	8.1	1.44	5.6	X	X
NSD	A8-E3							
2	A8-E4	Fiber	Tremolite	6.62	0.24	27.6	X	X
3	A8-E5	Bundle	Tremolite	9.89	0.92	10.8	X	X
NSD	A8-E6							
4	A8-E7	Fiber	Tremolite	6.94	1.3	5.3	X	X
5	A8-E8	Bundle	Tremolite	15.56	1.42	11.0	X	X
6	A8-E9	Bundle	Tremolite	45.6	7.5	6.1	X	X
NSD	A8-F1							
NSD	A8-F10							
7	A8-F2	Fiber	Tremolite	8.82	1.47	6.0	X	X
NSD	A8-F3							
NSD	A8-F4							
NSD	A8-F5							
8	A8-G1	Bundle	Tremolite	19.68	1.45	13.6	X	X
NSD	A8-G10							
NSD	A8-G2							
NSD	A8-G3							
NSD	A8-G4							
NSD	A8-G5							
9	A8-G6	Bundle	Tremolite	5.34	1.02	5.2	X	X
NSD	A8-G7							
NSD	A8-G8							
NSD	A8-G9							

Org. Sample Wt.	Sample Wt. Post HL Separation
0.02055	0
Percent of Orig. Post Separation	0 (%)

Wt. Of Sample Analyzed	0.00002817	g
Filter size	201.1	mm <sup>2</sup>
Number of Structures Counted	9	Str.
Structures per Gram of Sample	3.20E+05	Str./g

Detection Limit	3.55E+04	Str./g
Analytical Sensitivity	3.55E+04	Str./g

Reviewer /Date Digitally signed by MW Rigler, Ph.D.  
Date: 2018.09.06 14:29:53 -04'00'



TEM Bulk Talc Structure Count Sheet						
Project/ Sample No.	M65947-001 0.3% Tremolite in Talc		Grid Box #	8617	No. of Grids Counted	2
Analyst:	Analyst 4			Length	Width	G. O. Area
Date of Analysis	7/11/2018 - 7/12/2018		G. O. in microns =	105	105	11025
Initial Weight(g)	0.02055			105	105	11025
Analysis Type	Post Separation Talc Analysis		Grid Acceptance	Yes	Average	11025
Scope No.	Accelerating Voltage	100 KV	Loading%	25%	G.O.s Counted	25
3	Screen Magnification	20 KX	Area Examined mm <sup>2</sup>			0.276

Str. #	Grid Opening	Structure	Asbestos Type	Length	Width	Ratio	SAED	EDS
NSD	A8-E1							
NSD	A8-E10							
1	A8-E2	Bundle	Tremolite	8.8	1.3	6.8	X	X
NSD	A8-E3							
2	A8-E4	Fiber	Tremolite	5.9	0.2	29.5	X	X
3	A8-E5	Fiber	Tremolite	10.1	0.84	12.0	X	X
NSD	A8-E6							
4	A8-E7	Fiber	Tremolite	6.8	0.84	8.1	X	X
5	A8-E8	Fiber	Tremolite	13.8	0.9	15.3	X	X
6	A8-E9	Fiber	Tremolite	39.5	6.4	6.2		
NSD	A8-F1							
NSD	A8-F10							
7	A8-F2	Bundle	Tremolite	8.2	1.4	5.9	X	X
NSD	A8-F3							
NSD	A8-F4							
NSD	A8-F5							
8	A8-G1	Fiber	Tremolite	18.6	1.1	16.9	X	X
NSD	A8-G10							
NSD	A8-G2							
NSD	A8-G3							
9	A8-G4	Fiber	Tremolite	4.5	0.8	5.6	X	X
NSD	A8-G5							
10	A8-G6	Bundle	Tremolite	4.6	0.8	5.8	X	X
NSD	A8-G7							
NSD	A8-G8							
NSD	A8-G9							

Org. Sample Wt.	Sample Wt. Post HL Separation
0.02055	0
Percent of Orig. Post Separation	0 (%)

Wt. Of Sample Analyzed	0.00002817	g
Filter size	201.1	mm <sup>2</sup>
Number of Structures Counted	10	Str.
Structures per Gram of Sample	3.55E+05	Str./g

Detection Limit	3.55E+04	Str./g
Analytical Sensitivity	3.55E+04	Str./g

Reviewer /Date: Digitally signed by MW Rigler, Ph.D.  
Date: 2018.09.06 14:30:08 -04'00'

TEM Bulk Talc Structure Count Sheet						
Project/ Sample No.	M65947-004 0.3% Anthophyllite in Talc		Grid Box #	8617	No. of Grids Counted	2
Analyst:	Analyst 1			Length	Width	G. O. Area
Date of Analysis	8/7/18 - 8/8/18		G. O. in microns =	105	105	11025
Initial Weight(g)	0.02980			105	105	11025
Analysis Type	Post Separation Talc Analysis		Grid Acceptance	Yes	Average	11025
Scope No.	Accelerating Voltage	100 KV	Loading%	25%	G.O.s Counted	25
3	Screen Magnification	20 KX	Area Examined mm²			0.276

Str. #	Grid Opening	Structure	Asbestos Type	Length	Width	Ratio	SAED	EDS
1	A4-A1	Fiber	Anthophyllite	6.5	0.46	14.1	X	X
NSD	A4-A10							
NSD	A4-A2							
NSD	A4-A3							
NSD	A4-A4	Bundle	Anthophyllite	6.3	1.4	4.5	X	X
2	A4-A5	Bundle	Anthophyllite	56.8	2.3	24.7	X	X
3	A4-A6	Bundle	Anthophyllite	43.9	1.2	36.6	X	X
4	A4-A7	Bundle	Anthophyllite	43.5	3.8	11.4	X	X
NSD	A4-A8							
5	A4-A9	Bundle	Anthophyllite	28.8	4.6	6.3	X	X
6	A4-D10	Bundle	Anthophyllite	19.4	1.8	10.8	X	X
NSD	A4-D6							
7	A4-D7	Bundle	Anthophyllite	8.6	1.3	6.6	X	X
8	A4-D8	Bundle	Anthophyllite	9.2	1	9.2	X	X
9	A4-D8	Bundle	Anthophyllite	11.2	2.1	5.3	X	X
10	A4-D9	Fiber	Anthophyllite	5.9	1	5.9	X	X
11	A4-D9	Fiber	Anthophyllite	10.5	1.8	5.8	X	X
NSD	A4-E1							
12	A4-E10	Bundle	Anthophyllite	19.9	0.8	24.9	X	X
13	A4-E10	Fiber	Anthophyllite	4.8	0.3	16.0	X	X
14	A4-E2	Fiber	Anthophyllite	22.4	2.3	9.7	X	X
15	A4-E3	Fiber	Anthophyllite	6.6	0.7	9.4	X	X
NSD	A4-E4							
NSD	A4-E5							
16	A4-E6	Fiber	Anthophyllite	7.1	0.9	7.9	X	X
17	A4-E7	Bundle	Anthophyllite	49.8	2.9	17.2	X	X
NSD	A4-E8							
18	A4-E9	Fiber	Anthophyllite	3.9	0.6	6.5	X	X
19	A4-E9	Bundle	Anthophyllite	21.1	1.3	16.2	X	X
20	A4-E9	Bundle	Anthophyllite	11.3	1.5	7.5	X	X

Org. Sample Wt.	Sample Wt. Post HL Separation
0.02980	0 g
Percent of Orig. Post Separation	0 (%)

Wt. Of Sample Analyzed	0.00004084 g
Filter size	201.1 mm <sup>2</sup>
Number of Structures Counted	20 Str.
per Gram of Sample	4.90E+05 Str./g

Detection Limit	2.45E+04 Str./g
Analytical Sensitivity	2.45E+04 Str./g

Digitally signed by MW Rigler, Ph.D.  
Reviewer /Date Date: 2018.09.06 14:30:21 -04'00'

TEM Bulk Talc Structure Count Sheet						
Project/ Sample No.	M65947-004 0.3% Anthophyllite in Talc		Grid Box #	8617	No. of Grids Counted	2
Analyst:	Analyst 2			Length	Width	G. O. Area
Date of Analysis	8/2/2018		G. O. in microns =	105	105	11025
Initial Weight(g)	0.02980			105	105	11025
Analysis Type	Post Separation Talc Analysis		Grid Acceptance	Yes	Average	11025
Scope No.	Accelerating Voltage	100 KV	Loading%	25%	G.O.s Counted	25
3	Screen Magnification	20 KX	Area Examined mm²			0.276

Str. #	Grid Opening	Structure	Asbestos Type	Length	Width	Ratio	SAED	EDS
1	A4-A1	Bundle	Anthophyllite	7	0.5	14.0	X	X
2	A4-A1	Bundle	Anthophyllite	30.2	2	15.1	X	X
NSD	A4-A10							
NSD	A4-A2							
NSD	A4-A3							
3	A4-A4	Fiber	Anthophyllite	5.8	1	5.8	X	X
4	A4-A5	Bundle	Anthophyllite	52	2	26.0	X	X
5	A4-A6	Bundle	Anthophyllite	42	0.9	46.7	X	X
6	A4-A7	Bundle	Anthophyllite	44	4.5	9.8	X	X
NSD	A4-A8							
7	A4-A9	Bundle	Anthophyllite	40	2	20.0	X	X
8	A4-D10	Bundle	Anthophyllite	18	2	9.0	X	X
NSD	A4-D6							
9	A4-D7	Bundle	Anthophyllite	8	1.2	6.7	X	X
10	A4-D8	Bundle	Anthophyllite	8.5	0.8	10.6	X	X
11	A4-D8	Bundle	Anthophyllite	10.5	2	5.3		
12	A4-D9	Fiber	Anthophyllite	6	0.9	6.7	X	X
13	A4-D9	Bundle	Anthophyllite	10	1.7	5.9	X	X
NSD	A4-E1							
14	A4-E10	Fiber	Anthophyllite	4.4	0.3	14.7	X	X
15	A4-E10	Bundle	Anthophyllite	20	0.6	33.3	X	X
16	A4-E2	Fiber	Anthophyllite	22	2	11.0	X	X
17	A4-E3	Fiber	Anthophyllite	6.3	0.8	7.9	X	X
NSD	A4-E4							
NSD	A4-E5							
18	A4-E6	Fiber	Anthophyllite	7	0.8	8.8	X	X
19	A4-E7	Bundle	Anthophyllite	50	3	16.7	X	X
NSD	A4-E8							
20	A4-E9	Bundle	Anthophyllite	10.5	1.5	7.0	X	X
21	A4-E9	Fiber	Anthophyllite	3.7	0.6	6.2	X	X
22	A4-E9	Bundle	Anthophyllite	20.6	1.5	13.7	X	X

Org. Sample Wt.	Sample Wt. Post HL Separation
0.02980	0 g
Percent of Orig. Post Separation	0 (%)

Wt. Of Sample Analyzed	0.00004084 g
Filter size	201.1 mm <sup>2</sup>
Number of Structures Counted	22 Str.
Structures per Gram of Sample	5.39E+05 Str./g

Detection Limit	2.45E+04 Str./g
Analytical Sensitivity	2.45E+04 Str./g

Digitally signed by MW Rigler, Ph.D.  
Reviewer /Date: 2018.09.06 14:30:35 -04'00'

TEM Bulk Talc Structure Count Sheet						
Project/ Sample No.	M65947-004 0.3% Anthophyllite in Talc		Grid Box #	8617	No. of Grids Counted	2
Analyst:	Analyst 3			Length	Width	G. O. Area
Date of Analysis	7/27/2018		G. O. in microns =	105	105	11025
Initial Weight(g)	0.02980			105	105	11025
Analysis Type	Post Separation Talc Analysis		Grid Acceptance	Yes	Average	11025
Scope No.	Accelerating Voltage	100 KV	Loading%	25%	G.O.s Counted	25
3	Screen Magnification	20 KX	Area Examined mm²			0.276

Str. #	Grid Opening	Structure	Asbestos Type	Length	Width	Ratio	SAED	EDS
1	A4-A1	Fiber	Anthophyllite	7.36	0.46	16.0	X	X
2	A4-A1	Bundle	Anthophyllite	33.12	1.84	18.0	X	X
NSD	A4-A10							
NSD	A4-A2							
NSD	A4-A3							
NSD	A4-A4	Bundle	Anthophyllite	6.39	1.38	4.6	X	X
3	A4-A5	Bundle	Anthophyllite	57.5	2.76	20.8	X	X
4	A4-A6	Bundle	Anthophyllite	44.16	1.38	32.0	X	X
5	A4-A7	Bundle	Anthophyllite	46	4.14	11.1	X	X
NSD	A4-A8							
6	A4-A9	Bundle	Anthophyllite	30.3	5.06	6.0	X	X
7	A4-D10	Bundle	Anthophyllite	19.32	1.68	11.5	X	X
NSD	A4-D6							
8	A4-D7	Fiber	Anthophyllite	8.61	1.26	6.8	X	X
9	A4-D8	Bundle	Anthophyllite	8.4	0.92	9.1	X	X
10	A4-D8	Fiber	Anthophyllite	10.92	2.1	5.2	X	X
11	A4-D9	Fiber	Anthophyllite	5.67	1.01	5.6	X	X
12	A4-D9	Fiber	Anthophyllite	11.34	1.68	6.8	X	X
NSD	A4-E1							
13	A4-E10	Bundle	Anthophyllite	18.06	2.94	6.1	X	X
14	A4-E10	Fiber	Anthophyllite	17.01	0.34	50.0	X	X
15	A4-E2	Fiber	Anthophyllite	22.26	2.52	8.8	X	X
16	A4-E3	Fiber	Anthophyllite	6.93	0.67	10.3	X	X
NSD	A4-E4							
NSD	A4-E5							
17	A4-E6	Fiber	Anthophyllite	7.14	0.76	9.4	X	X
18	A4-E7	Bundle	Anthophyllite	49.14	2.94	16.7	X	X
NSD	A4-E8							
19	A4-E9	Fiber	Anthophyllite	3.99	0.59	6.8	X	X
20	A4-E9	Bundle	Anthophyllite	17.64	1.26	14.0	X	X

Org. Sample Wt.	Sample Wt. Post HL Separation	
0.02980	0	g
Percent of Orig. Post Separation	0	(%)

Wt. Of Sample Analyzed	0.00004084	g
Filter size	201.1	mm <sup>2</sup>
Number of Structures Counted	20	Str.
per Gram of Sample	4.90E+05	Str./g

Detection Limit	2.45E+04	Str./g
--------------------	----------	--------

Analytical Sensitivity	2.45E+04	Str./g
---------------------------	----------	--------

Digitally signed by MW Rigler, Ph.D.  
Reviewer /Date: 2018.09.06 14:30:48 -04'00'

TEM Bulk Talc Structure Count Sheet						
Project/ Sample No.	M65947-004 0.3% Anthophyllite in Talc		Grid Box #	8617	No. of Grids Counted	2
Analyst:	Analyst 4			Length	Width	G. O. Area
Date of Analysis	7/23/2018 - 7/25/2018		G. O. in microns =	105	105	11025
Initial Weight(g)	0.02980			105	105	11025
Analysis Type	Post Separation Talc Analysis		Grid Acceptance	Yes	Average	11025
Scope No.	Accelerating Voltage	100 KV	Loading%	25%	G.O.s Counted	25
3	Screen Magnification	20 KX	Area Examined mm²			0.276

Str. #	Grid Opening	Structure	Asbestos Type	Length	Width	Ratio	SAED	EDS
1	A4-A1	Fiber	Anthophyllite	6.4	0.38	16.8	X	X
2	A4-A1	Bundle	Anthophyllite	31.5	2.2	14.3	X	X
NSD	A4-A10							
NSD	A4-A2							
NSD	A4-A3							
3	A4-A4	Bundle	Anthophyllite	5.5	1.2	4.6	X	X
4	A4-A5	Bundle	Anthophyllite	55.5	2.4	23.1	X	X
5	A4-A6	Bundle	Anthophyllite	43.6	1.2	36.3	X	X
6	A4-A7	Bundle	Anthophyllite	43.2	3.6	12.0	X	X
NSD	A4-A8							
7	A4-A9	Bundle	Anthophyllite	27.5	4.4	6.3	X	X
8	A4-D10	Bundle	Anthophyllite	18.9	1.7	11.1	X	X
NSD	A4-D6							
9	A4-D7	Bundle	Anthophyllite	8.3	1.2	6.9	X	X
10	A4-D8	Bundle	Anthophyllite	9.3	1.1	8.5	X	X
11	A4-D8	Bundle	Anthophyllite	11.1	1.8	6.2	X	X
12	A4-D9	Bundle	Anthophyllite	6.3	0.82	7.7	X	X
13	A4-D9	Fiber	Anthophyllite	10.1	1.5	6.7	X	X
NSD	A4-E1							
14	A4-E10	Fiber	Anthophyllite	4.2	0.24	17.5	X	X
15	A4-E10	Bundle	Anthophyllite	19.3	0.84	23.0	X	X
16	A4-E2	Fiber	Anthophyllite	22.3	2.1	10.6	X	X
17	A4-E3	Fiber	Anthophyllite	6.3	0.68	9.3	X	X
NSD	A4-E4							
NSD	A4-E5							
18	A4-E6	Fiber	Anthophyllite	7.8	0.7	11.1	X	X
19	A4-E7	Bundle	Anthophyllite	50.2	3.1	16.2	X	X
NSD	A4-E8							
20	A4-E9	Bundle	Anthophyllite	10.4	1.2	8.7	X	X
21	A4-E9	Bundle	Anthophyllite	21.3	1.2	17.8	X	X
22	A4-E9	Fiber	Anthophyllite	3.7	0.5	7.4	X	X

Org. Sample Wt.	Sample Wt. Post HL Separation
0.02980	0
Percent of Orig. Post Separation	0 (%)

Wt. Of Sample Analyzed	0.00004084
Filter size	201.1
Number of Structures Counted	22
Structures per Gram of Sample	5.39E+05

Detection Limit	2.45E+04
Analytical Sensitivity	2.45E+04

Digitally signed by MW Rigler, Ph.D.  
Reviewer Date: 2018.09.06 14:31:03 -04'00'